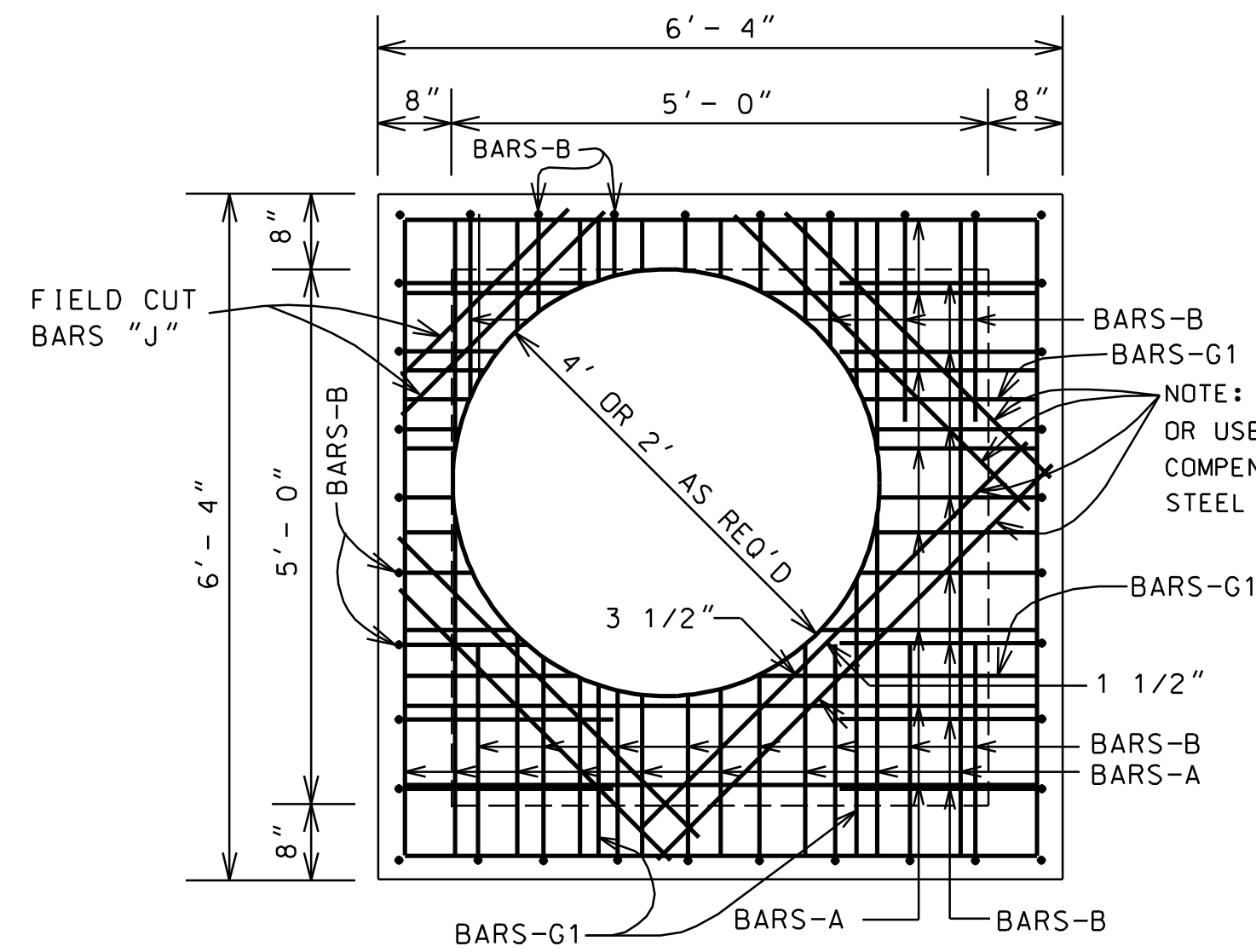
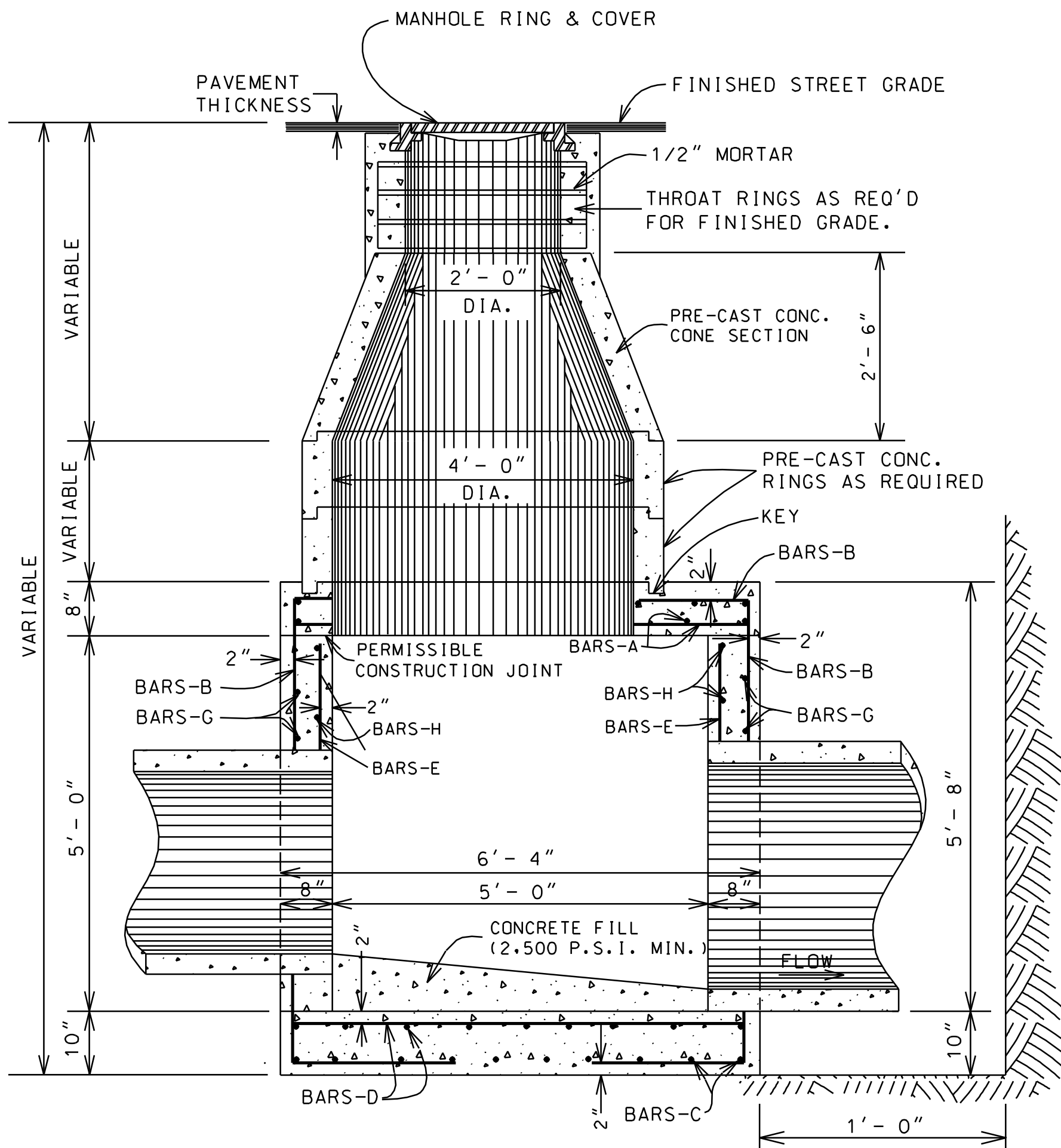
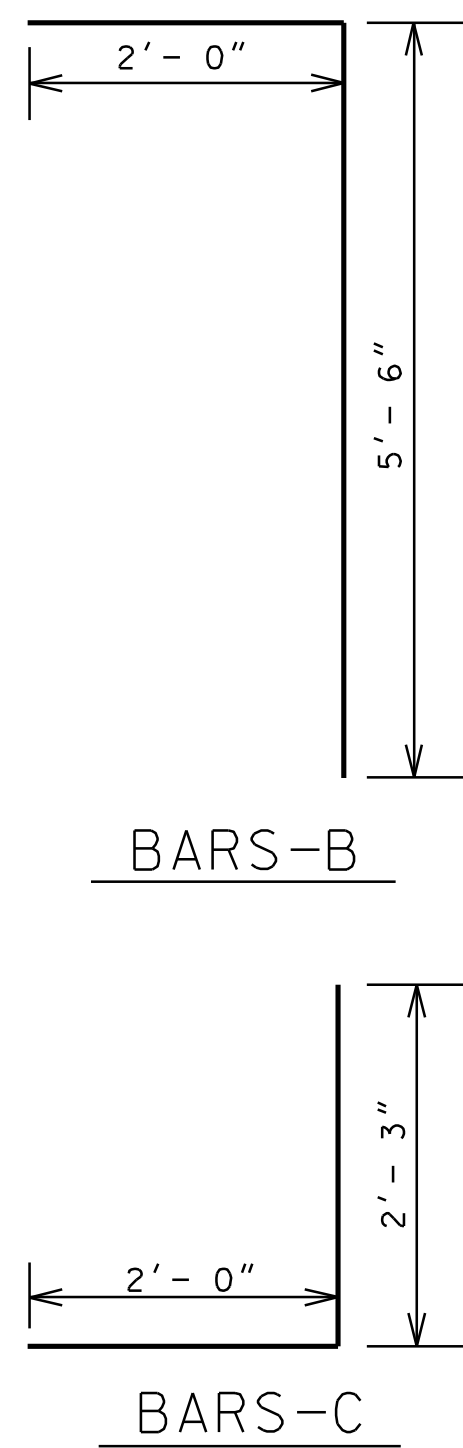


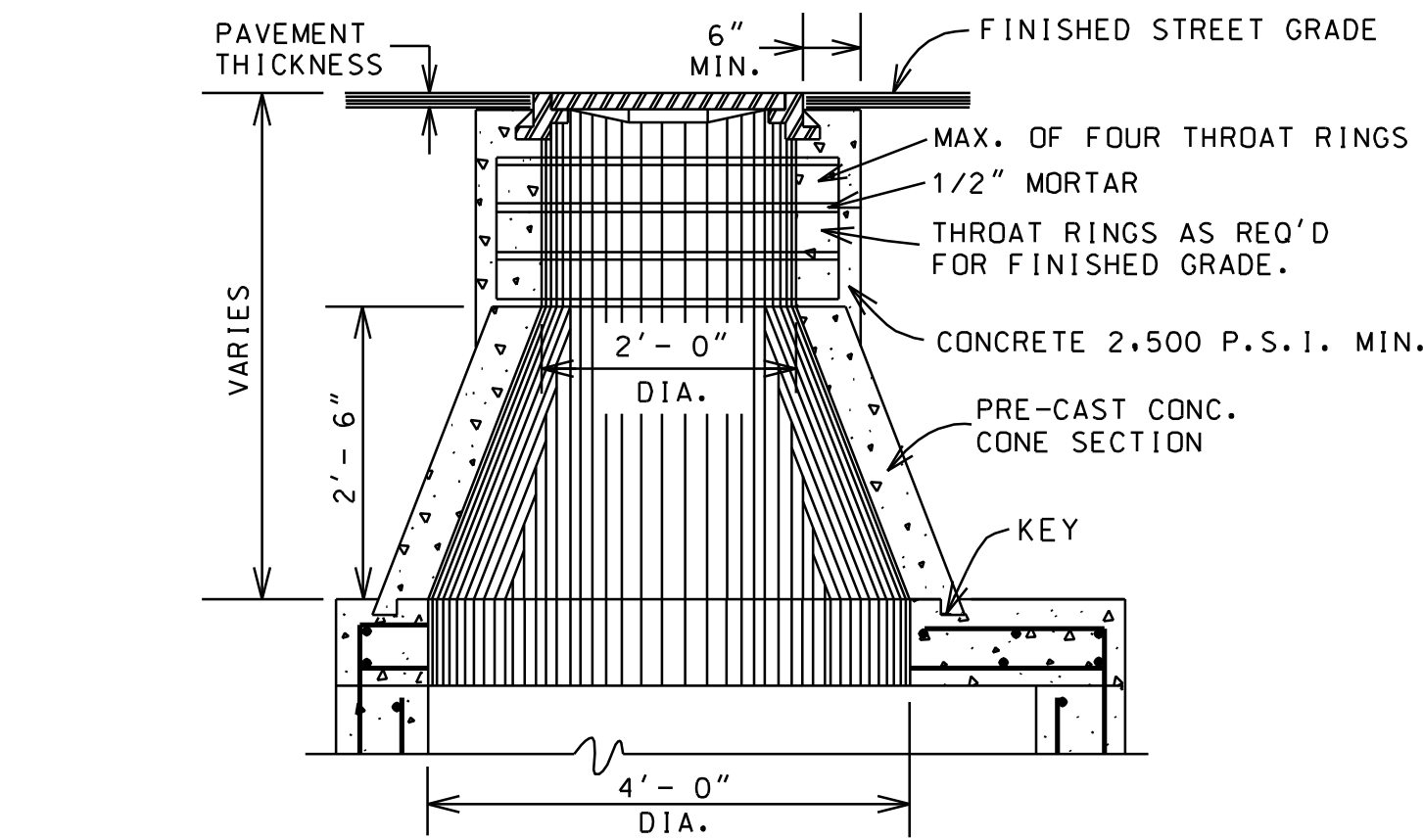
PLAN



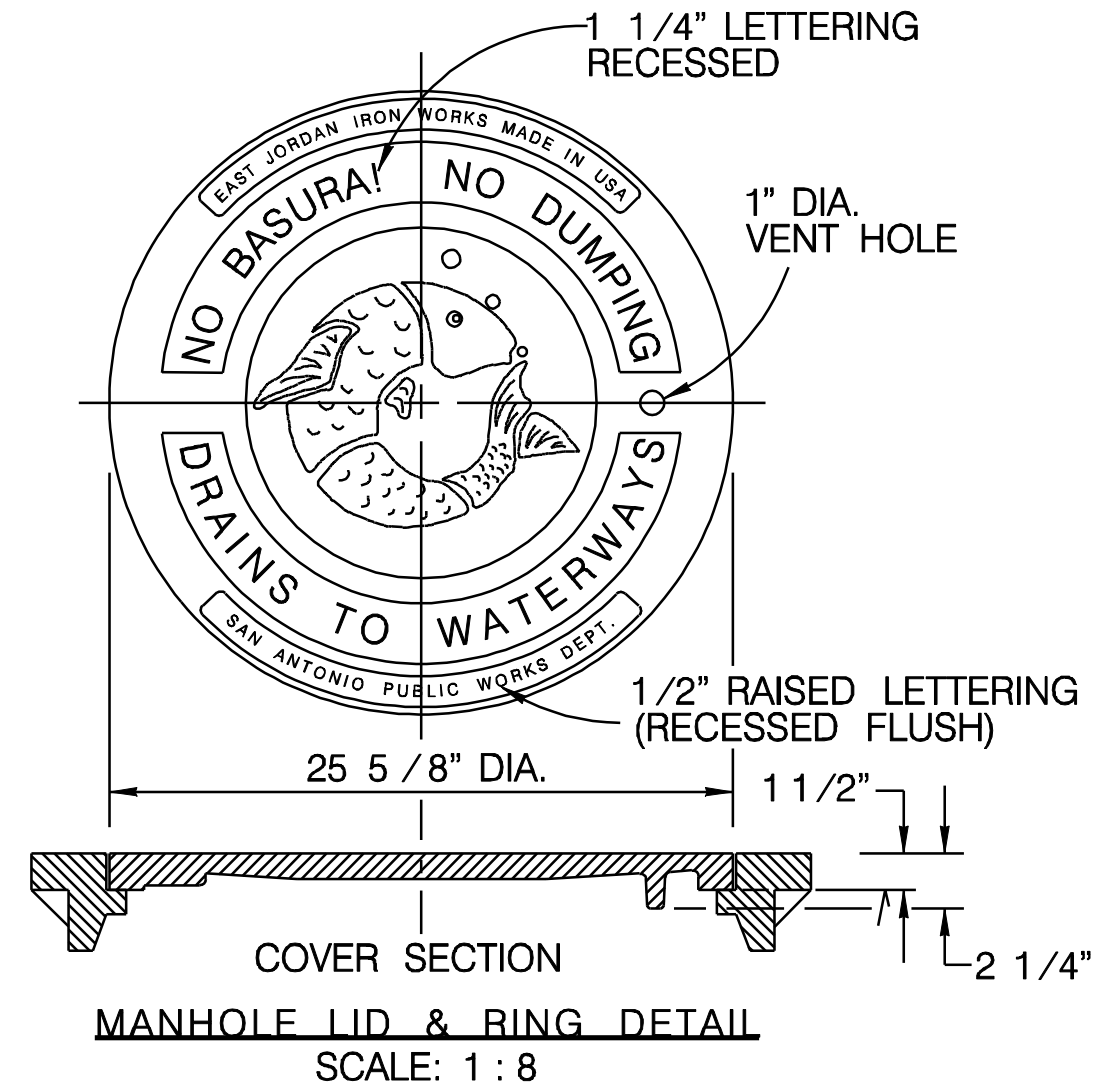
PLAN  
OF JUNCTION BOX TOP SLAB SHOWING STEEL



SECTION A-A



SECTION B-B



NOTES FOR MANHOLE LID AND RING  
 1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT."  
 2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.  
 3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM.  
 4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.  
 5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.

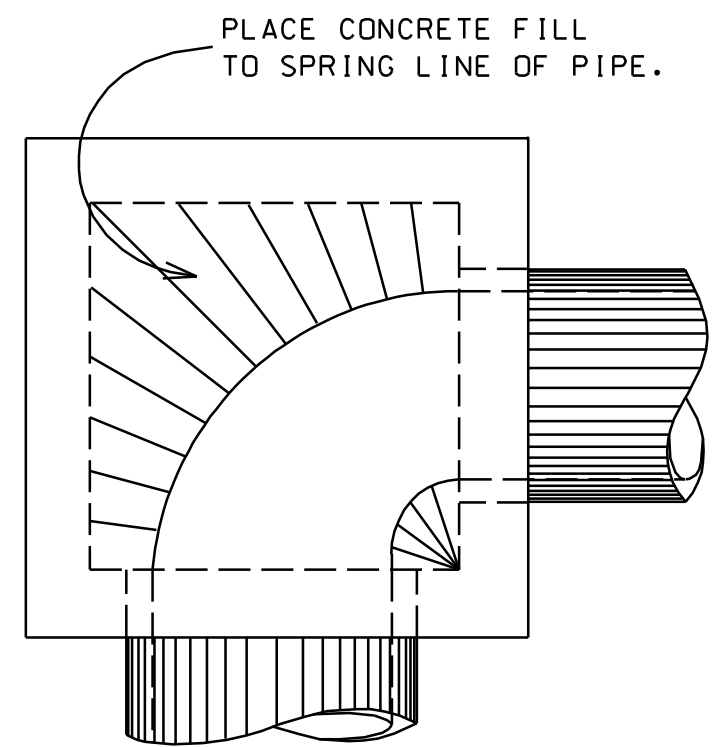
SCHEDULE FOR REINFORCING STL.

SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	18	4	9" O.C.	6'-1"	73
	B	36	5	8" O.C.	7'-6"	282
	C	36	5	8" O.C.	4'-3"	160
STRAIGHT	D	18	4	9" O.C.	6'-1"	73
STRAIGHT	E	20	3	12" O.C.	4'-11"	37
STRAIGHT	G	20	4	12" O.C.	6'-1"	81
STRAIGHT	G <sub>1</sub>	8	4	AS SHOWN	6'-1"	33
STRAIGHT	H	24	3	12" O.C.	5'-5"	49
STRAIGHT	J	8	6	3 1/2" O.C.	4'-11"	59
					TOTAL	847 lbs.

CLASS "A" CONCRETE - 5.03 CU. YDS.  
 (DOES NOT EXCLUDE MANHOLE OPENINGS OR  
 PIPE OPENING)

\* NOTE: BAR SIZE AND SPACING BASED ON SPANS AS  
 SHOWN. ANY REVISIONS TO THESE SPANS  
 SHALL INCLUDE A RE-DESIGN ON STEEL REQ'D.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).



CURVED DEFLECTOR DETAIL

JANUARY 2005  
 STANDARD PLANS  
 CITY OF SAN ANTONIO, TEXAS  
 DEPARTMENT OF PUBLIC WORKS  
 5'x5'x5' JUNCTION BOX  
 STANDARDS

DRAWN BY:	DATE:	REVISIONS:	SCALE: SEE ABOVE
CHECKED BY:			DATE:
NAT HARDY, P.E.			SHEET: OF